

WHAT IS CLAIMED IS:

1 1. A method of loading a driver in a host, comprising:

2 providing a host, a fabric, and an I/O enclosure;

3 assigning an I/O controller that is within the I/O enclosure to the host;

4 before loading a driver for the I/O controller into the host, sending a verification message

5 to the I/O enclosure to determine whether a communication channel exists for the driver to be

6 loaded; and

7 if the I/O enclosure responds to the verification message, then loading the driver into the

8 host.

9 2. The method of claim 1, further comprising:

10 determining whether a channel adapter in the host has been initialized.

11 3. The method of claim 1, further comprising:

12 determining whether a forwarding table in a switch in the fabric has been initialized.

13 4. The method of claim 1, further comprising:

2 determining whether a channel adapter in the I/O enclosure has been initialized.

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1 A1 5. The method of claim 1, further comprising:

2 initializing channel adapters and forwarding tables.

1 6. A method of loading a driver in a host, comprising:
2 providing a plurality of hosts, a fabric, and a plurality of I/O enclosures;
3 assigning a plurality of I/O controllers that are within the plurality of I/O enclosures to the
4 plurality of hosts;

5 determining a list of drivers that correspond to the plurality of I/O controllers to be loaded
6 into the plurality of hosts;

7 before loading the drivers into the plurality of hosts, for each driver, sending a
8 verification message to the I/O controller that corresponds to the driver; and

9 modifying the list of drivers if a response to any of the verification messages has been
10 received.

1 7. The method of claim 6, further comprising:

2 receiving an interrupt before modifying the list of drivers.

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8. The method of claim 6, further comprising:

determining the list of drivers, at least in part, by sending a message to a subnet manager

to request a list of I/O controllers assigned to a host.

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9. The method of claim 6, further comprising:

determining the list of drivers, at least in part, by scanning the fabric for I/O controllers.

10. The method of claim 6, further comprising:

obtaining the list of drivers from a storage.

11. The method of claim 6, wherein:

receipt of the response confirms that a subnet manager has finished initializing a local

channel adapter port, a remote channel adapter port, and forwarding tables in intervening

switches that will be used in communication between a driver to be loaded and the I/O controller

that corresponds to the driver.

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1 12. The method of claim 6, further comprising:

2 'notifying a fabric control driver when local channel adapter ports are configured and
3 ready for fabric connectivity

1 13. A computer readable medium having stored thereon instructions which, when
2 executed by a processor, cause the processor to perform a method for loading a driver in a host,
3 said method comprising:

4 installing a plurality of hosts, a fabric, and a plurality of I/O enclosures;

5 assigning a plurality of I/O controllers that are within the plurality of I/O enclosures to the
6 plurality of hosts;

7 determining a list of drivers that correspond to the plurality of I/O controllers to be loaded
8 into the plurality of hosts;

9 before loading the drivers into the plurality of hosts, for each driver, sending a
10 verification message to the I/O controller that corresponds to the driver; and

11 modifying the list of drivers if a response to any of the verification messages has been
12 received.

1 14. The computer readable medium of claim 13, wherein said method further

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2 comprising:

receiving an interrupt before modifying the list of drivers.

1 15. The computer readable medium of claim 13, wherein said method further

2 comprising:

3 determining the list of drivers, at least in part, by sending a message to a subnet manager
4 to request a list of I/O controllers assigned to a host.

5 16. The computer readable medium of claim 13, wherein said method further

6 comprising:

7 determining the list of drivers, at least in part, by scanning the fabric for I/O controllers.

1 17. The computer readable medium of claim 13, wherein said method further

2 comprising:

3 obtaining the list of drivers from a storage.

18. The computer readable medium of claim 13, wherein:

receipt of the response confirms that a subnet manager has finished initializing a local

channel adapter port, a remote channel adapter port, and forwarding tables in intervening

switches that will be used in communication between a driver to be loaded and the I/O controller

that corresponds to the driver.

19. The computer readable medium of claim 13, wherein said method further comprising:

notifying a fabric control driver when local channel adapter ports are configured and ready for fabric connectivity.

20. An apparatus, comprising:

a host, a fabric, and an I/O enclosure within a cluster;

a fabric control driver within the host;

an I/O controller within the I/O enclosure and assigned to the host;

the fabric control driver determining whether a communication channel to the I/O controller exists before loading into the host a driver that corresponds to the I/O controller.

1 21. The apparatus of claim 20, further comprising:

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A⁴ a local channel adapter within the host, forwarding tables in intervening switches, and a

remote channel adapter within the I/O enclosure,

wherein the fabric control driver determines the existence of a communication channel

5 while a subnet manager is initializing the local channel adapter, the forwarding tables in

6 intervening switches, and the remote channel adapter.

22. The apparatus of claim 21, further comprising:

a channel adapter driver in the host for the local channel adapter,

one or more ports on the local channel adapter,

wherein the channel adapter driver notifying the fabric control driver when the local
channel adapter ports are configured and ready for fabric connectivity.

1 23. The apparatus of claim 22, wherein:

2 the fabric control driver attempting to use the local channel adapter to communicate with

3 the I/O enclosure only after the local channel adapter is initialized and ready for fabric

4 connectivity.

the fabric control driver causing the loading of a driver into the host only after the local

channel adapter is initialized and ready for fabric connectivity.

25. The apparatus of claim 20, wherein:

the fabric control driver sending a verification message to the I/O enclosure.

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